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A NEW SUBSPECIES OF *EUPHYDRYAS* FROM WYOMING (NYMPHALIDAE)¹

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FORTY YEARS AGO, A. B. Klots (1930) published a paper which discussed several species of Wyoming Rhopalocera. In this paper, there was a brief discussion of *Euphydryas editha* (Boisduval) from the Snowy Range, Albany Co., Wyoming. The insect was not described and the only comment made was that the species should be nearest to *E. editha hutchinsi* form *montanus* McDunnough.

In 1969, colonies of *E. editha* were found in Albany Co.: Sherman Range (East of Laramie) and Snowy Range (near Centennial), and Carbon Co.: Sierra Madre mountains. The specimens collected appear relatively uniform in facies and sufficiently distinct from other known subspecies to warrant a name. The subspecies is being named in honor of Dr. Alexander B. Klots who published the first collection records for it. Since the name *klotsi* dos Passos has already been applied to a member of the *chalcidona* group, to avoid possible confusion, the new subspecific name has been derived from the first three letters of Dr. Klots's given names and the first letter of his surname.

***Euphydryas editha alebarki* Ssp. Nov.**

Male: Palpi orange, pale yellow at base. Antennae orange. Thorax and wings (dorsal) basally blackish with blue-black iridescent overscaling. Abdomen black (dorsally) and ringed with four yellow-orange bands distally; ventral surface centrally white with defining orange lines. Costal margin of primaries orange, broadened basally. Primary cell with two orange bars edged with dark brown, on whitish background. With reference to the accompanying plate, the spot bands on the primaries,

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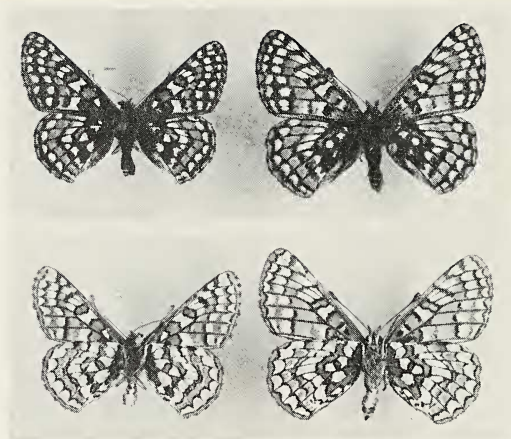


Fig. 1.—Dorsal and ventral surfaces of holotype male (left) and allotype female (right) of *Euphydryas editha alebarki*.



Fig. 2.—Male genitalic structures viewed from end of abdomen after covering hairs have been removed.

starting with the outer margin, are: narrow somewhat diffuse orange band of small elongated quadrate spots, band of whitish spots ringed with orange, postmedian band of generally quadrate whitish spots ringed by a few orange scales, median band of orange spots. In the same order, the spot bands on the secondaries are: marginal row of elongated orange quadrate spots, band of whitish spots circled by a dusting of orange scales, band of large generally quadrate orange spots, band of whitish spots distally bordered by orange, cell-end spot orange, remaining basal spots white. On both wings, the dark ground color is dark brown, but appears black to the unaided eye. There are long hairs on the upper surface of the wings basally. The whitish color when observed under a low-power microscope is almost pure white. There are generally a few orange scales bordering the white areas which produce the overall off-white color. The wing fringes are checkered with brown and white.

Ventrally the general pattern of the dorsal surface is repeated, but the white areas are much more expanded and orange generally replaces the dark ground color. The bands are defined by narrow brown margins. The overall appearance is orange and white with brown pencilling.

Female: Generally similar to the male. Dorsally the whitish areas are more cream-colored even to a very pale yellow. The spots in the bands are larger than in the male and the median orange band on the primaries is smeared in aspect. The costal end of this band shows three pronounced cream spots, which while present in the male, are much less prominent. The basal hairs exhibit some orange. Ventrally the colors are more intense and the brown lines of the male are more nearly black in the female. Expanse (costal margin length): ♂ 1.6 cm. ♀ 1.8 cm.

Although this species was first collected in the Snowy Range, Albany Co., and the colony still exists, the type series is being named from material taken in Carbon Co. The reason for this is as follows: In both the Sherman Range and the Snowy Range, *E. editha* is sympatric with *E. anicia* (Doubleday). *E. anicia* exhibits a cline which runs from *bernadetta* Leussler through *eurytion* (Mead) to *capella* (Barnes). In many cases, *editha* cannot be separated from *ancia* by facies. For the male, the genitalia are distinctive, but the females are in doubt unless a coupled pair can be taken. To date, only *E. editha* has been taken at the Carbon Co. location, so that the females are determined by direct association with the males.

The type series consists of four males and four females taken by the author on 30-v-69 and 5-vi-69. Other series of the insect were also taken in the two Albany Co. locations cited.

Holotype. — ♂, Medicine Bow N. F., about 10 miles S.W. of Encampment on Battle Lake Road, Sierra Madre mountains, 8600', Carbon Co., Wyoming, 5 June, 1969.

Allotype. — ♀, Same locality as male on 30 May, 1969.

Paratypes. — 3 ♂ on same date as holotype and 3 ♀ on same date as allotype. No distribution of the type series has as yet been made as the material is currently needed for a continuing study of Wyoming Rhopalocera. The type series is in the collection of the author. Specimens from the Snowy Range are in the collection of the American Museum of Natural History.

Other locations at which this species has been taken are: Pole Mountain, Sherman Range, 8500', Medicine Bow N. F., Albany Co., and near the University of Wyoming Science Camp, Medicine Bow N. F., Snowy Range, 9900', Albany Co., Wyoming. The butterfly is found in open areas from the Upper Transition to the Lower Canadian Zones. Depending upon the year, it flies from late May into July.

In facies, this species is intermediate between *hutchinsi* McDunnough and a new species being described from Ouray Co., Colorado by F. M. Brown. It is not so dark as *hutchinsi*, described by McDunnough (1928) as "blackish," but is distinctly darker than the orange-yellow insect from Colorado. The Wyoming type series has been compared with the paratypes of *hutchinsi* and with the Ouray Co., Colorado type series. *E. editha hutchinsi* is known from the northern part of Wyoming (Sublette Co. and north) and in the dark alpine form *montanus* from Yellowstone National Park. The new subspecies *alebarki* is quite distinct from *montanus*.

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